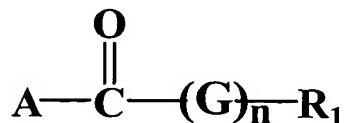
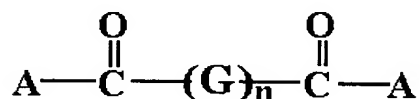


What is claimed is:

1. A liquid crystal compound with high helical twisting power having a formula (I), of:



or a formula (II), of:



wherein

A comprises naturally occurring organic multi-ring alcoholates selected from alcoholates of terpenol, borneol, cinchonidine, and quinine;

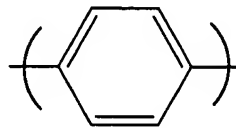
R<sub>1</sub> is hydrogen, alkyl, thioalkyl, or alkyloxy group, wherein alkyl, thioalkyl, and alkyloxy group can be straight or branched and have 1 to 10 carbon atoms optionally substituted with at least one fluorine atom;

n is 1, 2, or 3; and

G is the same or different and is unsubstituted or substituted cycloalkyl, heterocyclic, aryl, heteroaryl, arylalkyl, or heteroarylalkyl group, and is optionally substituted with at least one fluorine atom, alkyl, or alkyloxy group.

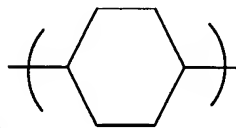
1           2.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_6H_{13}$ ,  $n$  is 1, A is

3    alcoholate of terpenol, and G is



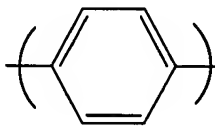
1           3.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-C_3H_7$ ,  $n$  is 1, A is

3    alcoholate of terpenol, and G is



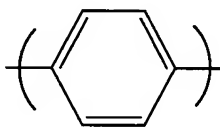
1           4.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_{10}H_{21}$ ,  $n$  is 2, A is

3    alcoholate of terpenol, and G is



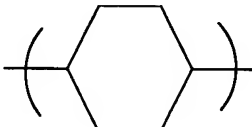
1           5.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_6H_{13}$ ,  $n$  is 1, A is

3    alcoholate of borneol, and G is



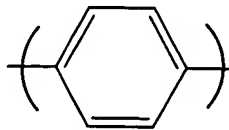
1           6.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-C_3H_7$ ,  $n$  is 1, A is

3    alcoholate of borneol, and G is



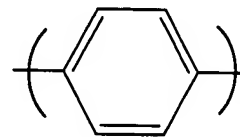
1           7.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_{10}H_{21}$ ,  $n$  is 2,  $A$  is

3    alcolholate of borneol, and  $G$  is



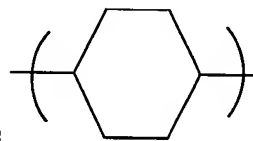
1           8.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_6H_{13}$ ,  $n$  is 1,  $A$  is

3    alcolholate of cinchonidine, and  $G$  is



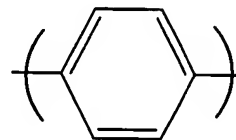
1           9.    The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-C_3H_7$ ,  $n$  is 1,  $A$  is

3    alcolholate of cinchonidine, and  $G$  is



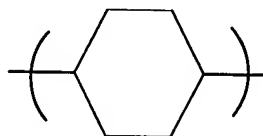
1           10.   The liquid crystal compound having formula (I)  
2    as claimed in claim 1, wherein  $R_1$  is  $-OC_{10}H_{21}$ ,  $n$  is 2,  $A$  is

3    alcolholate of cinchonidine, and  $G$  is



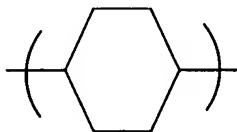
1           11.   The liquid crystal compound having formula (II)  
2    as claimed in claim 1, wherein  $n$  is 1,  $A$  is alcolholate

3    of terpenol, and  $G$  is



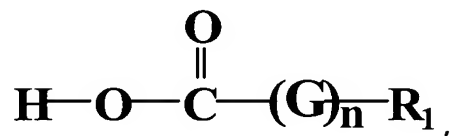
12. The liquid crystal compound having formula (II)  
as claimed in claim 1, wherein n is 1, A is alcolholate

of borneol, and G is

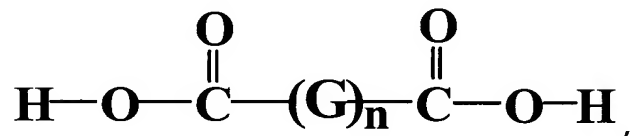


13. A method for preparing liquid crystal compounds  
with high helical twisting power, comprising:

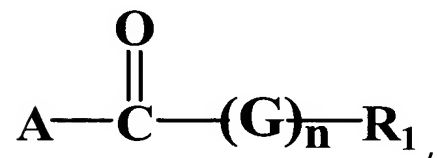
reacting an organic acid represented by a formula  
(III) of:



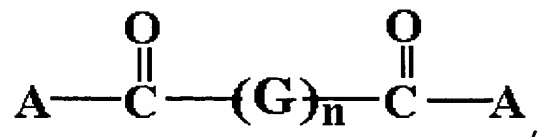
or a formula (IV) of:



and a natural alcohol with optical activity  
undergoing esterification to obtain a liquid  
crystal compound represented by a formula (I)  
of:



or a formula (II) of:



wherein

$R_1$  is hydrogen, alkyl, thioalkyl, or alkyloxy group,  
wherein alkyl, thioalkyl, and alkyloxy group  
can be straight or branched and have 1 to 10  
carbon atoms optionally substituted with at  
least one fluorine atom;

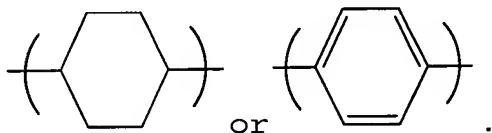
$n$  is 1, 2, or 3; and

$G$  is the same or different and is unsubstituted or  
substituted cycloalkyl, heterocyclic, aryl,  
heteroaryl, arylalkyl, or heteroarylalkyl  
group, and is optionally substituted with at  
least one fluorine atom, alkyl, or alkyloxy  
group.

14. The method as claimed in claim 13, wherein the  
natural alcohol with optical activity is terpenol,  
borneol, cinchonidine, quinine, or derivatives thereof.

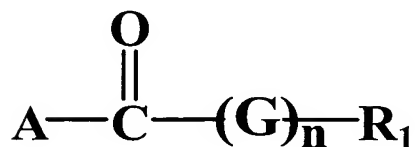
15. The method as claimed in claim 13, wherein the  
organic acid is benzoic acid, cyclohexane carboxylic  
acid, biphenyl carboxylic acid, para-cyclohexane  
dicarboxylic acid, terephthalic acid, 4-n-hexyloxy-  
benzoic acid, 4-n-propyl-cyclohexanecarboxylic acid, 4'-  
decyloxy-biphenyl-4-carboxylic acid, or cyclohexane-1,4-  
dicarboxylic acid, and is optionally substituted.

16. The method as claimed in claim 13, wherein  $G$  is



17. A liquid crystal composition, comprising:

at least one liquid crystal compound represented by  
a formula (I) of:



or a formula (II) of:



at a ratio from 3wt% to 30wt%, based on the weight  
of the liquid crystal composition; and  
a liquid crystal at a ratio from 3wt% to 97wt%,  
based on the weight of the liquid crystal  
composition.

18. The liquid crystal composition as claimed in  
claim 17, wherein the at least one liquid crystal  
compound represented by formula (I) or formula (II) is at  
a ratio from 5wt% to 20wt%.

19. The liquid crystal composition as claimed in  
claim 17, wherein the liquid crystal is a liquid crystal  
used in TN-LCD, STN-LCD, SSTN-LCD or TFT-LCD.

20. The liquid crystal composition as claimed in  
claim 17, wherein the liquid crystal composition is used  
in preparation of reflective polarizer or color filter.